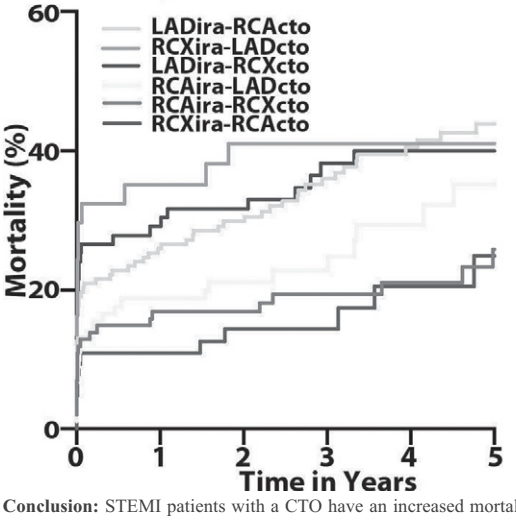
Figure 1: Long term mortality in STEMI patients stratified by the IRA and CTO combination



Conclusion: STEMI patients with a CTO have an increased mortality rate. Certain combinations of the CTO and the IRA seem to determine mortality even further, especially when the LAD is involved.

TCT-378

WITHDRAWN

TCT-379

Routine Thrombus Aspiration and Glycoprotein Inhibitor Use During Primary Percutaneous Coronary Intervention for ST Elevation Myocardial Infarction: Do All Patients Benefit?

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Background: Data from randomized trials and meta-analyses suggest that routine manual thrombus aspiration (TA) and glycoprotein inhibitor (GPI) use during PPCI for STEMI is associated with improved markers of reperfusion and reduced MACE at 1-year follow-up. However, real-world data is lacking, and debate continues over whether a strategy of selective TA in particular patient subgroups (e.g. large thrombus burden, short ischemic times) might be more appropriate; concerns over bleeding may also limit uptake of GPI.
Methods: Consecutive patients attending a single center undergoing PPCI for STEMI between September 2008 and December 2010 were included in this analysis. All patients received aspirin 300mg and clopidogrel 600mg at point of STEMI diagnosis in the community; use of TA and/or GPI during PPCI were at operator discretion. Demographic data and clinical outcomes were obtained by interrogation of local and national databases.
Results: 915 patients (mean age 64.6 +/- 12.6 years, 76.0% male) were included; overall inhospital mortality was 3.2% (29/915), with 30-day and 1-year mortality of 4.0% (37/915) and 9.5% (65/681) respectively. There was no significant 1-year survival advantage in patients receiving TA (55.7%) compared with those who did not (91.8% vs 88.3%; p=0.18). GPI use (44.3%) did not confer survival advantage either alone or when considered with TA for the whole population. However, in patients presenting within 3 hours of onset of symptoms, both TA (5.4% vs 12.0%; p=0.04) and GPI use (2.0% vs 15.2%; p=0.002) were associated with reduced mortality at 1 year.
Conclusion: In an unselected real-world population undergoing PPCI for STEMI, only patients presenting with a short ischemic time (within 3 hours of pain onset) derived 1-year survival benefit from TA or GPI. In contrast to published data, these findings suggest that routine TA/GPI use in this setting may not be universally beneficial. Further studies are required to inform the utility of a more targeted strategy for these therapeutic modalities in PPCI.

TCT-380

No Difference in Periprocedural Myocardial Infarction Between Direct Stenting and Balloon Pre-Dilatation During Elective Percutaneous Coronary Intervention

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Background: Compared to direct stenting (DS), balloon pre-dilatation (PD) may be associated with increased vessel wall damage and particle embolization, which could be associated with a higher rate of peri-procedural myocardial infarction (PPMI). We aimed to compare the two interventional strategies in regards to the incidence of PPMI among patients receiving elective percutaneous coronary intervention (PCI).
Methods: The study population was identified from a prospective registry of patients undergoing PCI from 04/2003 to 12/2010. All patients with pre-procedural MI, cardiogenic shock, in-stent restenosis, or rotational atherectomy were excluded from analysis. The primary end point was the incidence of PPMI defined as an elevation of creatinine kinase MB fraction levels to three times the upper limit of normal within the first 24 hours after PCI. Additionally, major adverse cardiac events (MACE) at 1 year, as the composite of all-cause death, Q-wave MI and target lesion revascularization, were also compared between patients undergoing DS vs. those receiving PD. Propensity-score matching from a non-parsimonious logistic regression model for treatment with DS vs. no DS was used to balance clinical and angiographic characteristics of the two groups. 25 relevant clinical and angiographic variables were used to calculate the propensity matching score. Patients receiving DS were matched one-to-one to those receiving PD using the nearest available pair matching method.
Results: 493 patients were matched in each group. Mean age was 65 years and 67% were male. The two groups were well matched. There were no significant clinical differences between the two groups. Angiographic characteristics were similar except for a higher number of lesions dilated in DS patients (1.46±1.24 vs. 1.27±0.61, p=0.003). Patients with PD underwent longer procedures (p <0.001), and received more contrast (p <0.001). PPMI did not differ between groups (4.3% DS vs. 6.3% PD, p=0.159). No significant differences in 1-year MACE were observed (6.9% DS vs. 6.7%PD, p=0.899).
Conclusion: The incidence of PPMI during elective PCI is similar with PD or DS. Unlike PCI for acute coronary syndrome, the strategy of direct stenting in the setting of elective PCI has no effect on the incidence of PPMI.

TCT-381

Improvement of Early Invasive Treatment for NSTE-ACS Over Time in Clinical Practice in Europe: Results of the EHS ACS Registry

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Background: ESC guidelines for the management of NSTE-ACS recommend an early invasive strategy in high-risk patients. In clinical practice, only a minority of patients are referred to an invasive strategy.
Methods: Between October 2006 to October 2008, 21,582 consecutive patients with ACS were enrolled into the Euro-Heart-Survey ACS-Registry to document treatment

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